



Ministry of  
Transportation and  
Communications

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BEFORE THE CANADIAN RADIO-TELEVISION  
AND TELECOMMUNICATIONS COMMISSION

IN THE MATTER of CRTC Telecom Public Notices  
1985-44 and 1985-64

*D*  
SUPPORT STRUCTURES AND RELATED ITEMS -  
PUBLIC PROCEEDING ON RATES

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*n* Final Argument submitted by the Minister of  
Transportation and Communications on behalf  
of the Government of Ontario

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## EXECUTIVE SUMMARY

- Ontario's key objective in this proceeding is the determination of the fairest rate setting methodology relative to cable operators' use of common carrier-owned support structures. That methodology should ensure that each of the parties is allocated a fair proportion of the costs of the facilities.
- The application of subjective judgement to the proposed methodologies should be minimized, while the extent to which the exercise of judgement can be publicly reviewed, debated, and understood should be maximized.
- Bell Canada and BC Tel's proposed approach to the costing and rate-making for support structures relies on the costing principles established in Phase II of the Inquiry into Telecommunications Carriers' Costing and Accounting Procedures.
- The Canadian Cable Television Association (CCTA) and Terra Nova Tel, on the other hand, endorse a formulary approach which allocates the carrying charges of support structures on the basis of the percentage of usable space actually utilized by the various parties.

Ontario's conclusions include the following:

- The application of Phase II cost inquiry principles to the support structure offering necessitates the input of an inordinate amount of subjective judgement in order to make the principles operational. As such, it is considered to be inappropriate in this situation.
- The Commission should adopt the "formulary" approach put forth by the CCTA and by Terra Nova Tel, relative to rate-making for the Support Structure Offering. This approach is perceived as being less dependent on subjective judgement than is the approach put forth by Bell Canada and by BC Tel.
- Cable operators should pay support structure rates to federally regulated telephone companies only where the support structures are owned by the telephone companies.
- The following assumptions should be incorporated into the application of the "formulary" approach:
  - Cable operators occupy one foot of the usable pole space.
  - The "neutral" or "safety" space should be included in the calculation of "usable" pole space.

- Weighted average usable space should be estimated based on a telephone company-wide sampling of poles.
- With regard to "tiering", the formulary approach should result in three distinct formulae; namely, one for each of (1) pole rates, (2) duct rates, (3) strand rates.
- The calculation of each of these formulae should be based on telephone company-wide, as opposed to cable company-wide averages.
- These three formulae should be adjusted periodically, but not more frequently than annually, to reflect changes relative to depreciation, pole lengths, etc., which have transpired over the period.
- Ontario is opposed to the development of specific rates for specific cable companies, because it is believed that the administrative costs associated with such a procedure would substantially increase the overall costs to be recovered by the telephone companies.



- The Partial System Offering (PSO) rate should be viewed as two components -- the support structure component, and the cable component.
- The same rating philosophy and considerations should be incorporated into the development of the support structure component of the PSO rate, as are incorporated into the development of the support structure rate.
- The rate for the cable component should be sufficient to recover the costs associated with the telephone company's provisioning and ownership of the cable, and tariffed in the same fashion as any regular telephone equipment offering.



A. INTRODUCTION

Since Telecom Decision CRTC 77-6, "Bell Canada, Tariff for the Use of Support Structures by Cable Television Licensees", there has remained unresolved the methodology to establish support structure-related rates for services provided to cable operators by the federally regulated common carriers. Accordingly, the Commission, in CRTC Telecom Public Notice 1985-44, in July 1985, announced its intention to conduct a public hearing to determine the most appropriate methodology. On August 7, 1985, the Ontario Government wrote to the Commission advising it of its intention to participate in the hearing. Subsequent to the filing of evidence by Bell Canada, the Canadian Cable Television Association, British Columbia Telephone Company, and Terra Nova Tel, Ontario submitted interrogatories to both Bell Canada and the Canadian Cable Television Association, and participated in the cross-examination process associated with the public hearing.

It has been established that it is the general practice of the cable industry to rent space on existing telephone or electric power utility poles for the attachment of cabledistribution facilities. The view has evolved over time that due to environmental and economic factors, sharing arrangements minimize unnecessary and costly duplication of plant for all users. Nonetheless, pole attachment arrangements seem to have generated considerable debate for a variety of reasons. First, given the historical background of pole attachment issues, namely that poles and ducts are

typically owned by telephone and electric power utility companies, which often have entered into joint use (or joint ownership) agreements for the use of each other's poles, it is less than surprising that the relative newcomers to the pole attachment arena, the cable operators, should incur some difficulty in the process of being integrated into the existing, established relationships. Second, conflict arises, understandably, from efforts by each industry to minimize its share of the costs of jointly used facilities. As the industries are unable to reach a mutually satisfactory agreement, the Government of Ontario believes that the Commission must develop an equitable cost sharing arrangement.

B. THE ISSUE

It is Ontario's view that the key objective in this proceeding is the determination of a rate setting methodology relative to cable operators' use of common carrier-owned support structures which will result in adequate compensation being paid by cable operators to the federally regulated carriers. What is needed then is a methodology which will ensure that each of the parties be allocated a fair proportion of the costs of the facilities. Further, it is Ontario's view that one way to attain this objective is to choose that particular costing methodology which relies least on the application of subjective judgement to the calculation of the various components which enter into the proposed formulae.

Ontario realizes that both proposed methodologies contain some element of subjectivity, as demonstrated in the following exchange between Messrs. Dunbar and Elliott at pp. 603-604:

Mr. Dunbar: You have said elsewhere in your evidence that it is more appropriate to set rates for support structures by using value-of-service considerations than by any arbitrary mathematical formula to allocate fixed common costs. I am wondering how a subjective determination by you is more objective than by what you refer to as an arbitrary mathematical formula.

Mr. Elliott: Well, I guess they are both -- I would not argue with you. I might have chosen the word "subjective" and somebody else used the word "arbitrary", but I would agree with you.

Ontario's objective is to minimize the amount of subjective judgement required, and where judgement is required, to maximize the extent to which the exercise of judgement can be publicly reviewed, debated, and understood.

C. THE PROPOSALS

Bell Canada and BC Tel's approach to the costing and rate-making for support structure relies on the costing principles established in Phase II of the Inquiry into Telecommunications Carriers' Costing and Accounting Procedures as detailed in Telecom Decision CRTC 79-16. In Telecom Decisions CRTC 77-6 and 78-6, the Commission stated:



"...rates for services offered under this tariff should be sufficient to recover the full costs of providing them, consisting of the causally attributable costs and an adequate contribution to the common costs, calculated in some reasonable manner."

Bell's interpretation of the "causally attributable costs" appears at p. 7 of its evidence:

"Bell Canada interprets the "causally attributable costs" to be the prospective incremental direct, indirect, and variable common costs as defined in the Phase II Decision (Telecom Decision CRTC 79-16), and the "common costs" to be the fixed common costs as defined in that Decision."

The Canadian Cable Television Association (CCTA) and Terra Nova Tel, on the other hand, endorse a formulary approach which allocates the carrying charges of support structures on the basis of the percentage of usable space actually utilized by the various parties. (The percentage of usable space actually used by the various parties is referred to hereinafter as "the allocator").

Section D highlights the type and degree of subjective judgement required in the Bell/BC Tel approach, with reference to (1) the vastly differing results which arise when two different parties attempt to apply this particular approach, (2) the unavoidable use of "estimation" in the calculation of the "loss of productivity" component of incremental costs, and (3) the confidential nature of the pertinent data with respect to this approach, versus the totally unconfidential nature

of the formulary approach. By contrast, it will be demonstrated that the only component requiring judgement in the formulary approach is "the allocator".

Section D is followed by a discussion of the formulary approach in Section E. The requirement for a tiered rate structure and the establishment of a rate for the Partial System Offering are discussed in Sections F and G respectively. Ontario's conclusions are summarized in Section H.

D. BELL CANADA/BC TEL APPROACH

While Bell Canada's approach is theoretically in accordance with Phase II cost inquiry principles, and while these principles can often be successfully applied, Ontario's concern with respect to the application of these principles to the Support Structure Offering relates to the inordinate amount of judgement required to make the principles operational in this instance.

This reliance on judgement is best illustrated with reference to the vast differences between Bell Canada's cost estimates and BC Tel's cost estimates. For instance, the following exchange relative to incremental cost differentials transpired between Messrs. Dalfen and Mellick at p. 664 of the transcript:

Mr. Dalfen: Okay. I drew your attention specifically to the red bars on that chart, which are incremental costs, and I was asking you why Bell's incremental costs were more than six times those of BC Tel and the U.S. carriers according to Mr. Glist's testimony. That was my question. It had nothing to do with anything but incremental costs.

Mr. Mellick: Okay. On that basis then I will answer it. The difference -- the answer I gave previously, in that first of all Bell Canada offers a greater number of services in different positions on the pole strand -- on the poles, different mixtures of strand, we have different situations vis-a-vis the geographical situation being on right-of-way as opposed to being in rear, we have the problems of co-ordination of a greater number of agreements where the operator can take choices, and as a result of those there is greater confusion, misunderstanding of what has actually been agreed to, and those combine into -- with the operator making selective choices of the appropriate offering into a situation where Bell Canada would face higher costs.

Mr. Dalfen: And you think that adds up to an amount that is six times higher?

Mr. Mellick: Under the Phase II costing requirements and cost inclusions, et cetera, yes, sir, I am comfortable that it does add up to a good approximation of the cost.

Significant differences between the two telephone companies' costs were also evident with respect to the administration cost component of incremental costs. The following excerpt is from p. 571 of the transcript:

Mr. Dunbar: ...We are isolating here, as I understand it, your support structure administration costs, and you are coming up with an equivalent for strand and pole that surely must be equivalent to BC Tel's pole



offering of strand and pole; yet your administration costs are more than five times higher.

A similar, but even greater difference was evident with respect to the two telephone companies' estimates of the "lost productivity" component of incremental costs. (Lost productivity costs are the costs which consider the additional costs incurred by the telephone company when performing work operations on its own facilities when cable television licensees' coaxial cable and related equipment share Bell Canada's support structures). At pp. 666 and 667 of the transcript, it was established that such costs constitute a significant proportion of total incremental costs:

Mr. Dalfen: What of your lost productivity -- what percentage of your incremental costs roughly would lost productivity account for?

Mr. Mellick: Well, you have got the figures in the actual study.

Mr. Dalfen: But your arithmetic is better than mine, I think.

Mr. Mellick: Well--

Mr. Dalfen: I make it 37 percent.

Mr. Mellick: Well okay, of the -- using the figure 1,464,000, I make it that the loss of productivity would 544,000.

The vast differences between the two telephone companies' estimates of this particular variable is illustrated at p. 592 of the transcript:

Mr. Mellick: The annual equivalent cost of the productivity loss is \$544,000 in that study associated with 1(a).

Mr. Dunbar: And that works out to be 18 cents per 30 metres?

Mr. Mellick: Under the format requested by the Commission in 104, yes.

Mr. Dunbar: And then that compares to BC Tel's 1 1/2 cents per 30 metres?

Mr. Mellick: That is correct.

Mr. Dunbar: So yours are 12 times as high:

Mr. Mellick: That is what the figures would show.

Had the telephone companies proceeded to substantiate their rationale for the differences, Ontario would be less concerned. On the contrary however, the transcript is replete with illustrations of how the use of judgement is required in many components of the proposed approach.

For instance, at pp. 505-506 of the transcript, the following exchange transpired between Messrs. Dunbar and Mellick:

Mr. Dunbar: So you are not saying there is no charge on that you are just saying it is not -- you are not applying an hourly rate to hours?

Mr. Mellick: No. What I am saying is that there was no billing directly based upon that back in the cost study process. We may be -- we will be applying hours to a rate. But I think if we go to the particular question---

Mr. Dunbar: But you will not be basing it on time sheets, you are saying you are basing it on other estimations.

Mr. Mellick: We are basing it upon estimated times as opposed to reported times.

Mr. Dunbar: Right.

Mr. Mellick: For example, with the issue of productivity you are dealing always with a differential of how long a man would do it under one circumstance as opposed to doing it under another circumstance. So it is not an issue of trying to report the time because you are always dealing with a differential of what would have happened if the delay had not been there. It is a different kind of problem in terms of collecting the data.

BC Tel's comments with respect to the precision of its "loss of productivity" estimates were no more reassuring. At pp. 808 and 809 of the transcript, the following exchange took place between Ms. de Wilde and Mr. Dooling:

Ms. de Wilde: ... You stated that loss of productivity is estimated at 2 crew minutes per span installed. I am interested in how you determined that 2 minutes.

Mr. Dooling: We did no study. It was an estimate done by our outside plant engineering forces. Actually, it took some convincing to get them to admit that they had any kind of you might say, lost productivity. It is not a very sophisticated estimate. I would suggest it is probably low.

I will give you an example of a loss in productivity that is not reflected in this cost study, and it is definitely incremental to the existence of CATV plant. Shaw Cablevision has a labour dispute in the Province of British Columbia, and earlier this year, because CATV plant is co-located with BC Tel plant, we were struck in our Nelson and Trail operations. That is 108 man-days lost effort. That is lost productivity in the truest sense that occurred that is not reflected in this cost study.



Hence, while BC Tel was able to identify certain extraordinary examples of lost productivity costs, the company conceded to having had difficulty in obtaining consensus among its outside plant engineering forces that there was any kind of lost productivity whatsoever relative to the attachment of CATV cable to BC Tel support structures on an ongoing basis.

Additional examples of subjectivity in Bell's estimation of the quantification of its costs arose during the hearing. For instance, at pp. 581-582, the following discussion took place between Messrs. Dunbar and Mellick:

Mr. Dunbar: As I understand this exhibit -- or this response, you calculate lost productivity by first calculating the amount of aerial telephone cable you place in 1986, and you have shown that to be 7,055,000 metres. Is that correct?

...

Mr. Dunbar: ...Do you know how much aerial telephone cable was placed in '85?

Mr. Mellick: I do not have the figure, no.

Mr. Dunbar: You do not know if this is an increase over actuals for '85?

Mr. Mellick: I have no idea. To the best of my knowledge, there is no major change in placing. There could be some reduction as we go buried, but there is no major swing in this number, to the best of my knowledge.

And at pp 585-587, the exchange continued as follows:

Mr. Dunbar: And did you get the time estimates of the amount of extra time from each incidence from the people who work on the lines?

Mr. Mellick: We have got the best field advice that we can get on the additional time -- the time that will be taken to do these operations in the typical Bell Canada environment which is basically rear lot.

Mr. Dunbar: Have you ever done any time and motion studies to try and verify that type of loss of productivity?

Mr. Mellick: We have not done time and motion studies of a scientific nature. We have done analyses where we have had foremen do estimates in total and then gone through and looked at the various operations and say, how long does it take to do this, such as carrying a ladder to the pole, climbing and securing the ladder to a strand, lashing the cable to a strand, removing span clamps, clipping cable in the area we cannot lash it, additional dead ends for the lashing wire, we have done that analysis. We have not done time and motion. We have done our best estimate of how long it takes a craftsman to do those operations.

Mr. Dunbar: Have any of those studies been filed with the Commission?

Mr. Mellick: No sir, they have not. I think that the information that you have got here is as far as we have gone.

I might add that we had a somewhat of a time and motion study the other day when it was indicated that rather than encounter the delays on going on Bell strand that the operator in Magog would prefer to go on his own strand above. Using Bell Canada's costs for that our cost per span is around \$45 of capital. It would indicate to me, based upon his figures, that he would feel that by avoiding conflict on our strand he would prefer to incur, in Bell Canada's costs, \$45 of cost per strand per span to avoid that kind of conflict.

Mr. Dunbar: And I think you said this morning that no sort of time sheets or anything could be kept on this because it is part of a continuous job.

Mr. Mellick: Part of a continuous job and it is actually -- the operation is just delayed so you know at the end what will be done. The only way you could do a completely scientific analysis of this would be to take typical jobs, one where you were encountering the delay and another where you were not under equal conditions, equal circumstances, and measure the difference at the end of it. That would be a defensible time study recognizing the degree of exposure, 4 per cent, trying to determine that. You are trying to -- to set up that kind of controlled experiment would be very costly and we have not chosen to go that far. It could be done. It would be very costly. It would very obviously be a causal cost associated with providing this type of service if we were driven to go to that kind of measurement to meet the Commission's requirements.

Mr. Dunbar: Would the simple way of doing not be to just pick a sample kilometrage and go through it and measure how much time it takes when you are encountering cable and then pick another same kilometrage and measure the time it takes without the cable? Is that not the ---

Mr. Mellick: I think you could except that the fact is that you would then have to pick that two that we believe were typical. And what I am saying is that to find something which would be entirely typical in both circumstances would be a time consuming exercise.

And at pp. 587-591 the exchange continued:

Mr. Dunbar: BC Tel estimated that its loss of productivity was two crew minutes per span. Your estimates are 24.5 in the case of cable on Bell strand and 43 in the case of SSO cable below Bell. I estimate that is 1200% more in the case of SSO cable on Bell strand and over 2100 per cent more in the case of cable below strand. Do you have any explanation for why it



takes your crew so much longer to go around cable than it takes BC Tel's?

Mr. Mellick: Well, first of all our plant is largely rear lot urban. And I have not done extensive investigations in British Columbia...

...

Mr. Dunbar: What is the percentage of your poles located on rear lots, of your total poles?

...

Mr. Mellick: I do not know in a percentage. We do not keep records of that nature.

Mr. Dunbar: Thank you. Well, if you do not know the percentage, how do you know if it is more or less in BC?

Mr. Mellick: Our advice is that a very large portion of BC's plant is placed either on right-of-way, either on the roadway, the main road, or in main lot. We do not have percentage figures. I am only saying that hearsay has told me that there is that difference, enough to be sure that our conditions are somewhat different than BC Tel's and that I am comfortable with my estimates of productivity loss.

...

Mr. Dunbar: And how are BC Tel rear lots different from your rear lots?

Mr. Mellick: Into a large percentage of them they have lanes. Laneways would allow the access of power equipment...

Mr. Dunbar: Do you know what percentage of the time BC Tel can access their rear lanes with power equipment?

Mr. Mellick: No, I have no knowledge.

As illustrated by the following exchange between Messrs. Dunbar and Elliott at p. 597 of the tran-

script, the contribution to fixed common costs is also based on subjective estimation:

Mr. Dunbar: Now turning to the question of contribution, fixed common costs, I believe it is your evidence that the rates for support structure should cover incremental costs plus an adequate contribution of fixed common costs. Is that correct?

Mr. Elliott: Yes. That is correct.

Mr. Dunbar: And you have stated on page 8 of your evidence that the costs of pole, strand, and conduit are all fixed common costs?

Mr. Elliott: Those are fixed common costs as are other common costs of the company.

Mr. Dunbar: On page 10 of your evidence you have stated that the cost of support structure components which are shared are taken into account in the determination of the level of contribution to be paid by the licensee toward the fixed common costs.

Have you in fact calculated the costs associated with the investment in the poles and the related carrying charges?

Mr. Elliott: I have not done so, Mr. Dunbar. Others may have, but I have not done it. This was a -- we were talking about theory. In this case, I think we specifically state that in theory this is the methodology and the considerations that we are talking about, the methodological buildup.

Mr. Dunbar: But you have not in fact done a ---

Mr. Elliott: I have not done it, no.

Mr. Dunbar: How can you take that into account if you have not done it?

Mr. Elliott: Well, it could be done. I am not trying to state that -- I just said I have not done it.

and at p. 752 of the transcript:

Ms. de Wilde: ...Would you please find now Bell(CRTC)8. The third sentence of that interrogatory response which deals with rates for partial system offering, Bell notes it must recover from those partial system rates an appropriate level of contribution. The last sentence of the interrogatory reads:

"Factors considered in the development of this contribution associated with the "cable component" of the Partial System monthly rate include the level of the causal costs, unrecovered capital costs, and the benefit of Bell Canada's easements or rights-of-ways".

What does the reference to unrecovered capital costs mean?

Mr. Elliott: I think what we are referring to there is that the unrecovered capital is a factor determination of contribution because it would represent a factor of risk that would be involved in offering the service.

Ms. de Wilde: How would that factor be included in the calculation of the contribution?

Mr. Elliott: It would be part of the judgement that would have to be used in determining it.

Ms. de Wilde: You cannot quantify that?

Mr. Elliott: It is not a quantifiable kind of thing.

and at p. 755 of the transcript:

Ms. de Wilde: ...Are you able to weight these three factors that you have set out in the last sentence of interrogatory 8? Can you weight them?



Mr. Elliott: I have not got any specific weighting for them.

It appears to the Government of Ontario that the calculation of the contribution to fixed common costs would require Bell to negotiate on a company by company basis in the determination of the "value of service" which, according to Bell, is the most appropriate determinant of the level of contribution to fixed common costs. Ontario expects that the administration costs of such an approach would add significantly to the overall costs associated with pole attachment.

The above excerpts illustrate Ontario's concerns regarding how Bell's proposal could fix the level of the contribution to common costs in accordance with the "justness and reasonableness" rate provision of the Railway Act. Nonetheless, Ontario perceives the allocation of fixed common costs to be an important consideration, and would expect that a contribution to such costs would have to be made, should the Bell approach be adopted by the Commission.

In summary, Ontario believes that the "value of service" approach could appropriately be re-named, "what the market will bear" approach because of the type and degree of judgement required throughout the approach.

The problems of judgement are further compounded in the Bell approach by the extent to which much of the data is held in confidence with the Commission, and hence not publicly reviewable. This was graphically

illustrated in an exchange between Messrs. Elliott and Dunbar at pp. 541-542 of the transcript:

Mr. Dunbar: ...You have claimed confidentiality or have been supported in your claim for confidentiality with respect to over 80 per cent of that total cost. Is that correct?

Mr. Mellick: No. The figures speak for themselves.

Mr. Dunbar: Would you agree that it is over 80 per cent?

Mr. Mellick: I will accept that 80 per cent is a good, round figure.

And at p. 544 of the transcript:

Mr. Dunbar: So when we pass this through the analysis, we are still missing 80 per cent of the components, really, of all the incremental costs associated with the support structure agreement, are we not, as interveners?

Mr. Mellick: Yes.

E. THE FORMULARY APPROACH

In contrast to the "Bell approach", the CCTA and Terra Nova Tel advanced the "formulary" approach. This approach attempts to take the total annual expenses associated with the provision of support structures and allocate them among the users of the structures.

The allocation factor is based on the proportion of space actually occupied by the cable operators to the total usable space on the pole. The approach is modelled after one used by the Federal Communica-

tions Commission with respect to the allocation of pole costs, under authority of the Congress of the United States of America. The formula for calculating the pole rate can be abbreviated as follows:

$$\frac{\text{Space occupied by CATV}}{\text{Total Usable Space}} \times (\text{Operating expenses plus investment carrying charges})$$

The formula reflects the concept of relative use of the entire facility. The cable company pays its share of the total costs of the entire pole, including the unusable portion (below grade level, and between grade and minimum clearance levels).

Ontario believes that the CCTA approach is less complex than the formula advanced by Bell. Although both approaches require some subjective components, the only factor requiring subjective judgement in the formulary approach is the "allocator". The other costs in the formula are readily quantifiable, auditable and verifiable. As regards the "allocator", it is Ontario's perception that the determination of the denominator, (i.e. the "usable" portion of a facility), requires a greater amount of subjective judgement than does the determination of the numerator (i.e. the "amount of space actually occupied by CATV").

The calculation of both the "used" and the "usable" components will now be discussed separately with respect to the allocation of (1) pole (2) duct, and (3) strand, facilities.



CCTA contends that although it uses only one inch of space on the pole, cable operators are willing to pay for one foot of space needed for clearance between pole users. Bell Canada, on the other hand, attempted to demonstrate that cable operators from time to time use more than one foot of space, to attach such cable operator-owned items as terminal directional taps, line extenders, trunk amplifiers, drip loops, and power supply boxes. Bell Canada also hypothesized that the space required by cable operators may increase over time, as the cable industry anticipates offering some form of new information communications device and system. However, the following exchange at p. 76 of the transcript, is reflective of the inconclusive nature of this latter suggestion.

Mr. Kidd: Let me try to put the question another way. When you speak of return - feed systems and things such as that, is this going to require more cable redundancies, larger equipment for bi-directional systems. What is your opinion on that?

Mr. Chaston: My opinion is in respect of the electronics, and I think the electronics is -- there is no doubt the electronics will be more powerful; they will not necessarily be larger. We have seen a miniaturization of equipment come at a fast rate over the last few years and I am sure it will continue. So I think the equipment will become more capable of doing more things, but will not necessarily be any larger.

Mr. Kidd: Do you see the need for doubling cable, either through redundancy or possibly when it is a bi-directional system?

Mr. Chaston: No.

and also at pp. 81-83 of the transcript:

Mr. Kidd: ...I think I can put the question another way and perhaps conclude it at that. Let us assume that these ideas on page 12 of the document take place by 1990. And I am not talking about rates that you might file with the Commission or anything such as that. I am saying, assume that these three scenarios, that are on page 12, come about by 1990, one-way electronic publishing, returned feed functions and stand alone devices relying on intelligence and various software. Would you consider that the value of cable service has been increased as a result of those offerings?

Mr. Chaston: Once again, it is a very broad question. Value of service as perceived by whom? The cable service per se is a television delivery service and these additional ideas, and they are no more than that at the moment, may or may not, it depends -- it is a market consideration. They may be attractive to some people but not others. Without knowing the service, precisely the market for that service in any given area, it would be very difficult to say whether the service had increased. I think a lot of people would question whether pay TV has increased the value of service.

Mr. Kidd: You would not bring in such a service unless it was attractive to somebody would you?

Mr. Chaston: We would not know until we did it.

Mr. Kidd: You do not do any market forecasts?

Mr. Chaston: Yes, and they are -- infallible market forecasts have yet to be developed. I can remember video phones were once proposed, in 1968.

Mr. Classon: The market forecasts that were done at the time that the industry introduced pay TV were 10 per cent in the first year, 20 per cent in the second year, 30 per cent in the fourth year, and so on. The marketplace itself has dictated that those surveys were not accurate and in effect today, after three years after the introduction, we still only have a 15

per cent penetration after very strenuous marketing efforts in order to launch that service and support that service across this country. And in addition, at the time of the original licensing, seven individual pay TV licensees were introduced in Canada. Today we are down to three left out of those original seven. So sometimes market surveys can be deceiving when the product is introduced into the marketplace.

Ontario submits that the one foot space required for clearance between pole users be utilized in the calculation. This compromise between CCTA's one inch and Bell's "open-ended" suggestions has been successfully followed in the United States by the FCC.

The two contentious issues with respect to the "usable" space on a pole pertain to (1) the inclusion or exclusion of "neutral" space in the calculation of "usable" space, and (2) the most appropriate way to calculate average pole height.

With regard to the first point, Ontario submits that "neutral" space should in fact be included in the calculation of "usable" space, based on what appears to be electrical utilities' profitable use of the neutral space, for such things as street-lights.

With regard to the second point, there are various factors to be considered in calculating the average height of a pole. Ontario recommends the use of a sampling procedure to determine the weighted average pole length. In this regard, Ontario notes the exchange which transpired between Messrs. Butler and Chaston at p. 284 of the transcript



concerning responsibility for the expenses associated with the sampling of poles (as well as of ducts and strand):

Mr. Butler: And who would be doing these sample studies. BC Tel?

Mr. Chaston: I imagine we would be involved.

Mr. Butler: Yes. And who would pay for those studies? Would you be prepared to pay for them?

Mr. Chaston: I think the beneficiary of the rate should be.

Mr. Butler: If the rates were lowered then you would be prepared to pay for them. Is that what you are saying?

Mr. Chaston: That is right.

Concerning the allocation of duct space, there did not appear to be any dispute with the CCTA's contention at p. 140 of the transcript that the diameter of a .500 jacketed cable is .58 inches. (Exhibit CCTA 6). As such, Ontario's position is that this figure could be taken as the amount of space occupied by a CATV operator in a duct.

Unfortunately, there is less agreement with respect to the calculation of "total amount of usable space in a duct". BC Tel, in response to CCTA Interrogatory 400(d), indicated that "maximum fill" (i.e. the per cent of interior cross-sectional area of conduit which is usable) can only be quantified in each specific case or installation. Further, that the maximum fill will not normally exceed 60 per cent or 3/4 of the inside diameter. The CCTA, in its subsequent derivation of an allocator for duct,

has interpreted this response as meaning precisely 60 per cent, and concluded that approximately 18 to 20 cables can be inserted into this "usable" space, as indicated in the following exchange between Messrs. Chaston and Kidd at p. 139 of the transcript:

Mr. Kidd: ...Let us say 18 cables, if you like. But we are talking in the range of 18 to 20 cables that can go in what you call the usable space.

Mr. Chaston: Yes.

The uncertainty surrounding the accuracy of the CCTA's assumption is highlighted by the following excerpts from the transcript:

At pp. 139-140:

Mr. Kidd: If you had your facilities in a duct with cable facilities of the telephone company, and the telephone company said they wanted to pull another cable through that duct, in your experience, is there a risk of damage associated with pulling another cable through the duct?

Mr. Chaston: Pulling one more cable through, yes, there might be.

And at pp. 143-144:

Mr. Classon: I will read that into the record. The evidence says:

"Since BC Tel trunk cables are large capacity, they are placed, normally, one per duct. Assuming a ratio of 1 CATV cable in any given duct...."

So based on that evidence one would deduce that at any one time there are no more than two cables in a duct. But there I think we then have to deal with the relative size of that cable within the duct, meaning the pair cable of the telephone company and the coaxial cable of the CATV company.

And in an exchange between Messrs. Butler and Chaston at p. 304 of the transcript:

Mr. Butler: And I suggest to you, for instance in subdivisions, in the main, far less than 60 per cent of a duct is used. There would be one small cable for you and one small cable for us. Is that not so?

Mr. Chaston: The 60 per cent of usable space as the practical usable space was a figure given us by BC Tel.

Mr. Butler: That would be the maximum that you could use.

It is Ontario's view that this discrepancy in the various parties' perceptions as to the actual amount of usable space that exists in a duct, is not an unsurmountable problem. The telephone companies, BC Tel in particular, could be given the opportunity to submit a revised figure -- one that is more representative of "actual, usable" space, as opposed to "maximum, usable" space. Alternatively, the Commission may already have access to such information, which intervenors do not have. Barring these possibilities, sampling procedures could no doubt be used to arrive at a "workable" percentage.

Concerning the calculation of the "strand allocator" the choice to be made appears to be between the load carrying capacity of the strand as

measured by weight of the cables, and lashing machine capacity, as measured by number of cables.

The CCTA's position on strand is most succinctly stated at pp. 333-334 of the transcript in the following exchange between Ms. de Wilde and Mr. Chaston:

Ms. de Wilde: ...I take it in the case of strand that you have defined "usable capacity" as the maximum load-bearing capacity... I am looking at the definition of "usable capacity". The CCTA's position is that "usable capacity" should be defined as the maximum load-bearing capacity. Correct?

Mr. Chaston: The allowable maximum, yes. I differentiate that because strand has a breaking tension. Obviously, we do not want to load it to that extent. The Canadian Standards Association require it to be loaded no more than 60 per cent, and the load-bearing capacity we have used here is 60 per cent -- is that 60 per cent number.

BC Tel, at pp. 299-303 of the transcript attempted to discredit in two different ways, the load-carrying capacity argument in favour of an allocator based on the number of cables. It is Ontario's view, however, that Mr. Chaston's defence of the CCTA position on this issue was well formulated, as illustrated in the following exchange between Messrs. Butler and Chaston:

Mr. Butler: Well, let us test your logic on that. Supposing -- your calculations, as far as I understand it, have been done relative to a quarter-inch strand. Is that right?



Mr. Chaston: That is right.

Mr. Butler: All right. Now, if the larger diameter strand, let us say 7/16 of an inch, was to be used, what generally speaking would be the result? And I suggest to you the factor would then be smaller, would it not?

Mr. Chaston: Yes.

Mr. Butler: And that would mean, in the final analysis, that the rental rate that you would pay would be less. Right?

Mr. Chaston: Correct.

Mr. Butler: Now, I put it to you that if the reason that the larger diameter strand was being used is to provide for extra load which might be experienced as a result of heavy icing, then it would be giving greater protection to the cables spun on a strand. Is that right?

Mr. Chaston: The figure of 4 1/2 pounds is taken in a -- is the load-carrying capacity in a heavy ice load area, the worst in the country. So if you are suggesting that there is -- we need heavier strand in order ---

Mr. Butler: For icing.

Mr. Chaston: For icing. The 4 1/2 pounds is the heaviest ice load area.

Mr. Butler: And I suggest to you if we have a heavier strand that it is to your benefit as well as ours, and instead of paying less you should be paying more.

Mr. Chaston: It is not to our benefit. Why would --- the question of why the 7/16 strand has to first be answered. Certainly it is not needed for the CATV purpose. Presumably it is there because the owner of the structure has some plans for putting several heavy wires through that area. For CATV purposes, it is the structure owner's decision in the first place to decide whether they want to use quarter-inch of 7/16, and that is done without any consultation with the CATV company.

Once that has been erected, then if the cable company can make use of it and the structure owner has decided to use quarter-inch, then we are using 2.3 per cent of it, and that is perfectly adequate for even the heaviest ice loading.

Mr. Butler: So you are saying it does not matter to you. You would always be happy with quarter-inch. Is that right? You do not need anything more than quarter-inch, as I understand what you are saying now.

Mr. Chaston: Well, we have no say on whether it is quarter-inch or 7/16, but either is adequate.

Mr. Butler: And the bigger it gets, you say, the less you should have to pay.

Mr. Chaston: As a proportional share of the total usable capacity, yes.

Mr. Butler: Because you have got nothing to do with whether it gets bigger or not. Is that so?

Mr. Chaston: Presumably it gets bigger, as you say, because it is going to be used for heavier load by the owner.

Mr. Butler: All right. Well, supposing the load structure of the strand is 4 1/2 pounds, okay, and assuming that BC Tel cable lashed to the strand is 3 pounds. All right? And that leaves 1 1/2, according to my calculation. Now, along comes a cablevision company and they just put in their tiny little cable of .105 pounds, all right?

Mr. Chaston: Yes. Two ounces.

Mr. Butler: That leaves 1.39 left for the next and last cable which could be put on the strand, does it not? Do you agree?

Mr. Chaston: Yes.

Mr. Butler: But I suggest to you that that then would not be enough for the 1 1/2 pound cable that BC Tel would like to add. And yet you are saying that BC Tel should be responsible for that extra 1.3, are you not?

Mr. Chaston: If BC Tel wanted to put up a second cable of 1 1/2 pounds -- this is a very special condition you are setting up -- if the strand is so tightly loaded that the addition of a cable weighing two ounces a foot is going to make a difference, I suggest that there should be some reconsideration of the strand.

Mr. Butler: So you would have another extension of your formula to assist us in that kind of situation.

Mr. Chaston: Those hypothetical and very special circumstances have not been addressed.

Mr. Butler: But that might not be all that hypothetical.

Mr. Chaston: It may be.

Mr. Butler: Now, I think that is all I want to do with strands. Actually, your strand formula is different from the FCC formula, is it not?

Mr. Chaston: I do not believe the FCC have a strand formula.

Mr. Butler: Well, we will hear from the next witness, but I think that they try and include it in the aerial, in costing. But the next witness will know about that anyway.

Mr. Chaston: Incidentally, if it is different -- we believe it to be logical, and just because it is different from the FCC does not mean that it is not right. And if it happens to be an extension of the FCC formula and becomes a Canadian-made formula, so much the better.

It is Ontario's view, that while the Commission may choose to address the question of "hypothetical and very special circumstances" relative to strand cost allocation, that the weight or load carrying capacity of strand will be the most appropriate allocator as a general rule, as it represents the ultimate limiting factor with respect to strand.

It is also Ontario's view that, in discussing two recent U.S. pole attachment - related court cases<sup>1</sup> at pp. 390-409 of the transcript, Mr. Gist succeeded in countering suggestions that either of these cases had cast doubt over the underlying fundamentals of the space allocation formulary approach. In the Alabama Power case, the court has asked the FCC to charge some share of a utility's deferred taxes to cable operators, and to add additional administrative costs to its method of calculating common costs. The Florida Power case involves a jurisdictional question under U.S. law, which would not likely affect the jurisdiction of the Canadian Radio-television and Telecommunications Commission under Canadian law. Ontario would therefore agree with Mr. Chaston's evidence at p. 399 of the transcript, that "...the essence of the formula set forth, proposed in CCTA's evidence is fully consistent with a still vital FCC formula that is followed not only at the federal level but among many of the states in the U.S. that regulate pole attachments".

In summary, it is Ontario's perception that the formulary approach would minimize the requirement for subjective judgement as well as the need for resultant ad hoc proceedings, as compared with the Bell/BC Tel approach. While recognizing that the Bell/BC Tel approach is in accordance with Phase II cost inquiry principles Ontario submits that the extent to which judgement must be applied, and the degree of confidentiality associated with items

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1 Alabama Power and Florida Power



involving judgement, means that the use of Phase II costing techniques is inappropriate in this case. Ontario therefore, encourages the Commission to adopt the formulary approach for setting rates for support structures.

While recognizing that the Commission may wish to make adjustments to particular components of the formula (i.e. neutral space definition, calculation of usable space on a duct), it is expected that such adjustments would result in minor modifications only, to the end rate.

Ontario is of the belief that the benefits of a "formulary" approach will outweigh the benefits of a "value of service" approach for all parties concerned. The fact that the rate relationship between the telephone company and the cable operators will have some rational basis will mean that Bell Canada will be assured that increases in certain of its expenses will be compensated for. Also, the cable operators will be assured that the rental rates will not be made in an arbitrary manner. Third, from the Commission's point of view, such an approach should enhance the level of verifiability of the various cost components.

Ontario recommends that whatever support structure rates are established for 1) pole, 2) duct, and 3) strand, that this payment be made by the cable companies to the federally regulated carriers only in the instance where the support structures are owned by the carriers.

F. TIERING AND CABLE COMPANY SPECIFIC RATES

Item 4(c) of CRTC Telecom Public Notice 1985-64 requests comments concerning the requirement for a tiered rate structure depending upon the type of facilities employed.

After reviewing the evidence and transcript relative to this subject, Ontario is of the view that the adoption of the CCTA "formulary" approach should result in three distinct formulae; namely, one for each of (a) pole rates, (b) duct rates, and (c) strand rates. Ontario suggests that the formulae be looked at on a periodic basis, but not more than annually, in order that adjustments be made in order to reflect changes which have transpired with respect to depreciation, pole lengths, etc.

Concerning the possibility of tailoring the (1) pole, (2) duct, and (3) strand rates to reflect local cable company wide conditions, Ontario notes the following exchange between Messrs. Butler and Chaston at pp. 213 and 214 of the transcript:

Mr. Butler: You know, you are suggesting this uniform -- you see the Shangri La as the uniform method of FCC, with your own derivations, for the whole of Canada. But you are not suggesting, if you did have such a uniform method, that it would bring about -- it

would in any way bring about uniform rates across the country, are you?

Mr. Chaston: No, we are looking for a uniform formula.

Mr. Butler: Yes. And in fact, I suggest the reason there would not be uniform cablevision rates across Canada is that there are hundreds of other factors, other than the space allocation costs, which enter into the picture in determining the rates from place to place. Is that so?

Mr. Chaston: There are many rates, literally hundreds of rates established by the FCC, but they are based on different components of the formula, such as maintenance, depreciation and the other items which are referred to as the carrying charges. Those different -- the value of the FCC formula is that the formula is clear that the figures that go into the formula can reflect the local conditions and therefore the rates reflect the local conditions.

And at pp. 306-307, the following exchange took place between Messrs. Butler and Chaston.

Mr. Butler: ...

As to tiered rates, which is on page 22, you are accepting that different rates could be necessary if there are differing costs. Is that not so, Mr. Chaston? I think we are in agreement on that.

Mr. Chaston: Our evidence is that we must first establish the rates for the three principle elements. Tiering will be reviewed later.

Mr. Butler: But you are not, in principle, against tiering, are you---

Mr. Chaston: I think it has to be approached --

Mr. Butler: -- the way I read your evidence?

Mr. Chaston: It has be approached with some care because one could have an average developed over a large area applying to several CATV systems who only occupy -- a part of their service area is only part of that area. And it could happen quite easily that what appears to be a reasonable average over a large area actually discriminates against or favours one or the other companies if they happen to have a tiered rate but only one of the components of the tier in principal use.

Mr. Butler: Well are you against tiered rates or for them? Or you say just we should look at it a little more carefully later? Is that what you are saying?

Mr. Chaston: Yes. We should look at it more carefully later.

Ontario is opposed in principle to the development of specific rates for specific cable companies. Ontario believes that the administrative costs associated with such a procedure would substantially increase the overall costs to be recovered by the telephone companies. As such, the benefits allowing this degree of flexibility would be unlikely to outweigh the associated costs.

G. ESTABLISHMENT OF A PARTIAL SYSTEM OFFERING RATE

Ontario agrees with Bell Canada at p. 14 of its evidence that the Partial System Offering (PSO) should be priced to reflect the costs incurred in the provision of the service as well as an appropriate contribution. This would avoid a situation in which the service is subsidized by telephone subscribers. Ontario further agrees with Bell that the PSO can be viewed as two components -- the "support structure component" and the "cable



component". As such, the same rating philosophy and considerations should be incorporated in the development of "the support structure component" of the partial system rate, as are incorporated in the development of the support structure rate. Since it can be assumed that the support structure component will provide for a contribution to fixed common costs regardless of which methodology the Commission ultimately adopts, there would be no need for the "cable component" to do so. Rather, the rate for the cable component should be sufficient to recover the costs associated with the telephone company's provisioning and ownership of the cable. In other words, the rate should recover the causal costs associated with the provisioning of the cable. This particular offering should be tariffed in the same way as any other equipment offering of the telephone company.

#### H. CONCLUSIONS

- The application of Phase II cost inquiry principles to the support structure offering results in an inordinate amount of subjective judgement required to make the principles operational.
- The Commission should adopt the "formulary" approach put forth by the CCTA and by Terra Nova Tel, relative to rate-making for the Support Structure Offering. This approach is

perceived as being less dependent on subjective judgement than is the approach put forth by Bell Canada and by BC Tel.

- Cable operators should pay support structure rates to federally regulated telephone companies only where the support structures are owned by the telephone companies.
- The following assumptions should be incorporated into the application of the "formulary" approach:
  - Cable operators occupy one foot of the usable pole space.
  - The "neutral" or "safety" space should in fact be included in the calculation of "usable" pole space.
- Weighted average usable space should be estimated based on a telephone company wide sampling of poles.
- The costs associated with the sampling procedure should be paid for by the beneficiary of the new rates.
- Telephone companies should be given the opportunity to submit revised figures relative to the actual amount of usable space in a duct. Alternatively, sampling procedures should be used to arrive at a "workable" figure.

- A strand's load-carrying capacity, as the ultimate limiting factor, is a more appropriate strand "allocator" than is lashing machine capacity.
- Neither the Alabama Power case, nor the Florida Power case in the United States casts any doubt over the underlying fundamentals of the space allocation formula.
- With regard to "tiering", the formulary approach should result in three distinct formulae; namely, one for each of (1) pole rates, (2) duct rates, (3) strand rates.
- The calculation of each of these formulae should be based on telephone company-wide, as opposed to cable company-wide averages.
- These three formulae should be adjusted periodically, but not more frequently than annually, to reflect changes relative to depreciation, pole lengths, etc., which have transpired over the period.
- Ontario is opposed to the development of specific rates for specific cable companies because it is believed that the administrative costs associated with such a procedure would substantially increase the overall costs to be recovered by the telephone companies.

- The Partial System Offering (PSO) rate should be viewed as two components -- the support structure component, and the cable component.
- The same rating philosophy and considerations should be incorporated into the development of the support structure component of the PSO rate as are incorporated into the development of the support structure rate.
- The rate for the cable component should be sufficient to recover the costs associated with the telephone company's provisioning and ownership of the cable, and tariffed in the same fashion as any regular telephone equipment offering.







